

## Just the Facts About ...

# Drought & Your Well Water Supply

Approximately 80,000 people in Montgomery County depend upon domestic wells for their drinking water. These homes are outside the service area of the Washington Suburban Sanitary Commission and the City of Rockville, and are typically the large lot or rural areas of the county. One exception is the Town of Poolesville, which uses wells for its community water system. All of these well water users are particularly vulnerable to water supply shortages during periods of *drought*.

Water supply wells are typically drilled into bedrock, where they intercept groundwater in the water-saturated zone, known as the aquifer. The top of the saturated zone is referred to as the water table. The aquifer is both the source of water for people using wells, and the source of water for streams and natural springs. Normally, the loss of water from the aquifer to wells, springs, and streams is replenished by rainfall, known as recharge. During a drought, the aquifer is not recharged by rainfall. As the drought continues, the level of water in the aquifer is reduced, and the water table level goes down.

For people using wells, a drop in the water table can lead to reduced well yields. In severe cases, the wells can actually go dry as the water table elevation drops below the level of the well. Therefore, it is particularly important for residents dependent upon wells to conserve water during periods of drought, to minimize the impact of reduced water production.

### What is a Drought?

Stated in the simplest terms, a drought is a prolonged period without any significant rainfall. Our region receives, on average, approximately

45 inches of rainfall per year.

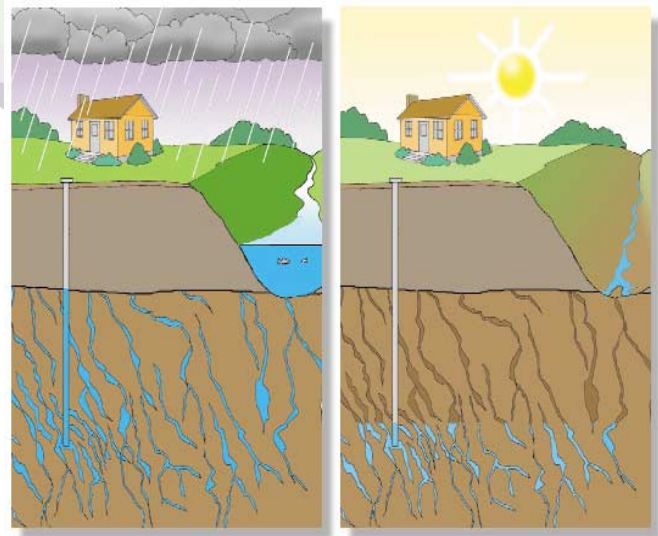
When we experience below average rainfall for several months, the water table begins to fall.

When this occurs, it is possible for wells to have significantly reduced yields. In extreme droughts, wells can actually go dry. During a drought, local streams and natural

springs will also have reduced flows and can ultimately go dry as the drought conditions worsen. It is important to note that droughts not only impact people who depend on wells for water supply, but also have a dramatic impact on the ecology of local streams and water bodies. During a drought, we may have some limited rainfall, but if it is not sufficient to recharge the aquifer and raise the water table, then the drought will continue.

### Why Should I Conserve Water?

Water conservation during a drought not only assists residents to manage their limited supply of water and share the aquifer supply with their neighbors, but can also ensure there is water in local streams. The fish and other aquatic organisms in our local streams can survive periodic droughts as long as there is some



water in the stream. Water conservation in our homes and businesses allows both people and nature to share this limited resource, particularly during periods of short supply.

### What are Drought Stages?

Montgomery County is impacted by two different regional drought plans. Of primary concern to well owners is the State of Maryland Drought Monitoring and Response Plan, which was developed in cooperation with Montgomery County and other local governments. The State plan identifies four distinct geographic drought regions based on similarities in weather patterns, hydrologic conditions, and primary sources of water supply. Montgomery County is located in the Central Region. In addition, the plan implements a series of color-coded Drought Stages with appropriate responses (see bottom of next page).

## What is the Metropolitan Washington Drought Plan (MWDP)?

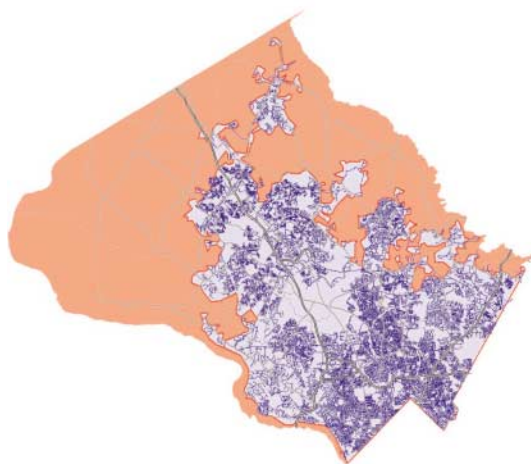
The MWDP is similar to the State of Maryland plan, but applies only to people who receive water service from one of the water supply authorities or municipalities in the metropolitan area that obtain their water supply from the Potomac River. These utilities maintain a large reservoir in western Maryland that can release water for both water supply and base river flow. This capability means that the metropolitan area is not as susceptible to drought as the areas that are on the groundwater-based wells and water supplies. As such, they have their own plan to advise their water customers. Well owners are not covered by this plan, and should only refer to notifications from the State of Maryland Plan and any modifications adopted by local government.

## What is the Current Drought Status of Montgomery County?

Notification of the drought status is published in the local press and other media. It is also available by calling the Department of Environmental Protection (DEP) at 240.777.7700, and is posted online at <http://askDEP.com>.

## What Can I Do to Conserve Water?

The average person uses about 65 gallons of water a day, mostly for indoor uses such as toilets, showers, and laundry. Less than five percent of this water is typically used for



Blue shading represents Public Water Service Areas. Red areas are dependent on wells, either private or municipal.

drinking water or for cooking. However, up to 15 percent of water use is actually wasted through toilet and faucet leaks. Checking for leaks and implementing additional conservation practices can significantly reduce water use.

Outdoor water use, such as lawn watering, landscape irrigation, and washing cars, can more than double the volume of water used and can quickly deplete existing groundwater supplies. Outdoor water conservation is perhaps the easiest means to reduce water use, and the most important first step during drought periods.

Contact DEP for additional factsheets containing scores of simple water conservation techniques for both indoors and outdoors, or visit the Water Conservation homepage at [askDEP.com](http://askDEP.com).

## What is the County Doing to Protect Groundwater?

The Department of Environmental Protection is developing a Groundwater Protection Strategy as an important tool for the comprehensive protection of groundwater quantity and quality throughout the county. The strat-

egy will identify groundwater resources, establish a baseline of existing conditions, and address factors which have the greatest influence on the health of this resource. Ultimately, DEP will recommend practices and regulations which will help ensure the quantity and quality of this vital resource, leading to a better environment and a safe and reliable source of drinking water.

## State of Maryland Drought Monitoring & Response Plan

### Stage One

#### Normal Conditions - Green

Precipitation, streamflows, groundwater, and reservoirs are at their normal operating levels although they may be reduced due to the initial stages of a drought (above 25% of normal). Residents are encouraged to use water wisely.

### Stage Two

#### Drought Watch - YELLOW

Water resources are significantly reduced from normal conditions (10-25% of normal). Residents should use voluntary conservation measures to achieve 5-10% reduction in water consumption.

### Stage Three

#### Drought Warning - ORANGE

Water resources are at 5-10% of normal. Residents should strive for a 10-15% reduction in water use.

### Stage Four

#### Drought Emergency - RED

Water resources are at near record or record lows (less than 5% of normal). The Governor declares a "Drought Emergency" by executive order. Residents must comply with mandatory nonessential water use restrictions to achieve 10-15% reduction in water consumption.

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### For more information:



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We've got answers!